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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,828	08/29/2001	Toshihiro Tsukada	P5976a	1001

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EXAMINER	
QIN, YIXING	
ART UNIT	**PAPER NUMBER**
2622	

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/942,828	TSUKADA, TOSHIHIRO	
	Examiner	Art Unit	
	Yixing Qin	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-15,17-19 and 21-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-15,17-19 and 21-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

In response to applicant's amendment received 7/5/05, all requested changes have been entered.

Response to Arguments

The Examiner has considered the arguments made and would like to expand on as to what exactly the interface device is. The Examiner would like to note that, from the abstract, the backup system is for the print control device 5a. One would understand this backup system is connected to or could be a part of the print control device 5a or simply take place of the printer control device 5a as suggested by Figs. 1, 6 and 8 of Indei. The Examine would like to further note that the backup system is the interface device – i.e. see Fig. 8 of Indei, where the system can interface with a printer and the network, which means it can interface with hosts on the network. One can see also in the other embodiments (Figs. 1 and 6) that they can also interface with the printer and the network.

From the arguments, the attorney asserts that the Examiner identifies floppy disk 56 as being part of the printer(5b) itself, and not as part of the printer controller device 5a, contrary to the claimed invention. The Examiner did not make such an assertion by simply stating that the floppy disk drive interfaces with the printer backup section and that the floppy disk driver is not the interface device simply because the Examiner used the word interface. For example, the workstations and servers in Fig. 2 of Indei also interface with the printer control device, but certainly one would not assume those to be the "interface device" as well.

The main argument is that there is no nonvolatile reserve data memory disposed in the interface device. The Examiner believes that there is memory disposed in the interface device. Looking at Fig. 8, that figure shows a backup system, with the floppy disk drive is part of the interface device. There is slight ambiguity in the wording from claim 4, but it is clear from Fig. 8 of the Indei reference that a floppy disk inserted into the drive would be disposed in the interface device. The Examiner would also like to point out that it would be obvious to one of ordinary skill to simply use other types of memory, such as an EEPROM. One skilled in the art would know the advantages of using various storage devices such as servers, disks, or internal memory. Using other types of storage would still be within the scope of the Indei invention.

One can also see that the various embodiments of Indei in Figs. 1, 6, and 8 have clear resemblance to the applicant's invention as shown in Fig. 1 of the applicant's drawings. For the reasons above, the Examiner believes that the main Indei reference still teaches and/or suggests the major components of the applicant's invention and this action is made final.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

I. Claims 1-7, 9-24, and 26-34, 36-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Indei (U.S. Patent No. 5,131,077) and in view of the applicant's admitted prior art in the background of the specification.

1. Claims 1, 13, 17 and 22

- The Indei reference discloses in Fig. 1 a file holding section (item 32). Column 3, lines 41-43 disclose that this file holding section 32 corresponds to a RAM or a magnetic disk. The RAM or magnetic disk can be nonvolatile.
- Although Indei describes data that can be received as billing data, user profile data, confidential data (column 3 , lines 27-30), it does not disclose specifically printer settings or historical data.
- The applicant's disclosure of the prior art in the background of the specification (henceforth referred to as simply "background") in page 1, lines 15-21, discloses "EEPROM," and storing "printer setting," and historical data."
- Indei, discloses in Fig. 1 a file r/w control section (item 31). One can see from the arrows that it can send and receive information from a host. Fig. 1 is an embodiment of Indei's backup control device for a printer (column 3, lines 27-37). The **interface device** is the backup system, and one can see from Figs. 1, 6 or 8 that it interfaces with a network (i.e. can interface to hosts) and a printer.
- Indei discloses in column 2, lines 57-59, that "[d]ata prepared [is transferred] to the print server 5, where it is printed out as a hard copy." Fig. 2 shows the print server include a printer.
- The applicant's background discloses in page 1, line 26 various command data that could be sent to the printer.
- Indei discloses in column 3, lines 55-61, a file renewing and forming section (Fig. 1, item 34). Lines 59-61, especially, disclose that the "...most recently updated important data is stored in the file holding section 34."
- In the third embodiment of Indei's invention, one would understand that a floppy disk is used when one is storing data into a floppy disk drive (Fig. 8, item 56). Column 6, lines 34-36 discloses that the data is backed up. Although the above limitations mentions items from the first embodiment in Fig. 1, one can clearly see the third embodiment also has file renewing and holding sections.
- One can see from Fig. 8 that the floppy disk drive is part of the backup system **nonvolatile reserve data memory unit** would be the floppy disk that is used to store the data in. When the floppy is in the drive, it would be disposed in the backup system. Also, as mentioned above, it would be obvious to one of ordinary skill in the art to have used other storage devices.
- Both the Indei and the prior art in the applicant's background relate to the backing up of protected or important data. Therefore, it would have been

obvious for one of ordinary skill in the art at the time of the invention to store information such as "printer setting" and "historical data" as mentioned in the background of the applicant's specification in a backup unit such as a floppy disk or a file server in Indei's invention. The motivation for doing so would be to backup different types of data deemed necessary by particular users.

- The limitations of claims 13, 17 and 22 are steps corresponding to the 2nd through 5th limitations of claim 1. Please refer to claim 1 for these rejections. Please note that the Indei reference discloses three different embodiments in which data is backed up into a file server, web server, and a floppy disk and one skilled in the art would have understood that other known backup storage devices could be used.
- Also, for the claims mentioning the use of a program to perform some steps, one skilled in the art would have known that Indei's invention could be created in either hardware (i.e. circuits/gates) or software (i.e. using hardware description language)

2. **Claims 2, 14, 18 and 23**
   - Indei discloses in Fig. 8 (item 51) a R/W control section for writing to the floppy disk drive. Column 6, lines 25-30 discloses that the backing up of the data to the floppy disk is triggered by a "...predetermined instant in time..."
   - Indei also discloses that the backup would, for instance, be activated once a day (column 3, lines 50-53). However, Indei further discloses "...the operator may make an instruction to transfer the data at any desired instant in time." (column 6, lines 48-49). One would understand the need the to update the backup storage with the most current settings at the time in which the settings in the primary storage changes so that the most recent backup can be used if a restore function is needed to be performed.

3. **Claims 3, 15 and 19**
   - Indei discloses in Fig. 8 (item 51) and column 6, lines 37-43 that a R/W control section acts as **data restore unit** since it controls the writing of the between the floppy disk and the file holding section.
   - Indei discloses in column 6, lines 50-55 that data can be quickly restored from the backup when it has been erased. The erasure of the data in the primary memory could trigger a restore.
   - Column 6, lines 11-12 discloses a time setting section 57, which acts as an **event controller for detecting the occurrence of said data-backup triggering event,** which is a "predetermined instant in time" as mentioned in the rejection to claim 2 above.
   - Indei discloses in column 6, lines 50-55 that data can be easily restored to the primary memory if it has been erased. Although not explicitly stated by Indei, one would have understood that the "**data-restore triggering event**" could

include a user inputting a request for file restore. The controller for this would be the file read and write control section (i.e. column 6, lines 37-43).

5. **Claim 5**

- The Indei reference discloses in Fig. 1 a file holding section (item 32). Column 3, lines 41-43 disclose that this file holding section 32 corresponds to a RAM or a magnetic disk. The RAM or magnetic disk could be nonvolatile. Indei describes data that can be received as billing data, user profile data, confidential data (column 3 , lines 27-30).
- Indei, discloses in Fig. 1 a file r/w control section (item 31). One can see from the arrows that it can send and receive information from a host. Fig. 1 is an embodiment of Indei's backup control device for a printer (column 3, lines 27-37).
- Indei discloses in column 2, lines 57-59, that "[d]ata prepared [is transferred] to the print server 5, where it is printed out as a hard copy." Fig. 2 shows the print server include a printer.
- The applicant's background discloses in page 1, line 26 various command data that could be sent to the printer.
- Indei discloses in column 3, lines 55-61, a file renewing and forming section (Fig. 1, item 34). Lines 59-61, especially, disclose that the "...most recently updated important data is stored in the file holding section 34."
- Indei discloses in Fig. 8 (item 51) a R/W control section for writing to the floppy disk drive the data being stored in the file holding section. Again, the interface device would be the **backup system** of Indei. As mentioned in claim 1 above, the floppy disk would be inside the backup system.
- The motivation for the combination of the Indei reference and the applicant's background information is addressed in claim 1.

6. **Claim 6**

- The Indei reference does not explicitly disclose that data is backed up when it is updated, column 6, lines 44-49 discloses that it could be backed up at a predetermined time or whenever an operator desires. One would want the latest information to be backed up, and it would be obvious to choose the time in which the primary data is to be updated as a predetermined time for backing the data into the reserve data memory.

7. **Claims 7 and 24**

- Again, from the rejection to claim 6 above, the operator can specify any desired time in which to backup the data in the primary memory to the reserve memory (i.e. floppy disk).
- Also, the applicant discloses in the background on page 1, lines 16-18, that settings could be restored from flash EEPROMs when the power is turned on.

9. Claims 9, 26 and 29

- Indei discloses in Fig. 8 (item 55) and column 6, lines 37-43 that a R/W control section acts as **data restore unit** since it controls the writing of the between the floppy disk and the file holding section.

10. Claims 10 and 27

- The applicant discloses in the background on page 1, lines 16-18, that settings could be restored from flash EEPROMs when the power is turned on. The primary memory could be empty (since powering off a printer can clear RAMs), in which case it would not hold **current protected data**.
- Indei discloses in column 6, lines 50-55 that data can be easily restored from a variety of backup devices that contain **reserve data memory units.**

11. Claims 11 and 28

- Indei discloses in Fig. 1 and column 3, lines 43-48 that the data in the file holding section 32 (**primary data memory**) is backed up in a file server. The Examiner would like to make a slight note here. One skilled in the art can apply different embodiments of Indei's invention depending on the needs (i.e. more storage, portability) of the storage device. Also, it would be obvious from Indei that a file server would be part of the backup system because Indei simply chose to use a larger storage medium in that embodiment instead of a smaller portable medium such as a floppy disk or even a faster, non-portable medium such as an EEPROM. Again, the backup system is the **interface device**.
- In the same figure, Indei discloses a network for connecting to the file server.
- In the same figure, Indei discloses a R/W control section (item 31) for controlling reading and writing to and from the file holding section 32. This R/W control section effectively acts as the **relay receiver** and the **relay transmitter** as being claimed by the applicant since it communicates with the file server and the file holding section of the print control.
- The applicant's background discloses on page 1, lines 24-26 that command data can be sent to the printer through an interface to a host device.

12. Claims 12

- Again, Indei discloses a network for connecting to the file server in Fig. 1. One skilled in the art would have understood that file transfer is two-way as indicated but the double-sided arrow next to the word network in Fig 1.

21. Claims 21 and 38

- Although neither Indei nor the applicant's background mentions the use of the above storage mediums, the examiner takes Official Notice that storage mediums such as CDs, floppies, hard disks, etc. are old and well known formats

for storing programs and data. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use one of the above storage mediums. The motivation for using such mediums is that the data stored is non-volatile and can be portable when using CDs or floppies.

30. Claim 30

A printing apparatus connected to an interface device comprising:

- Indei discloses in Fig. 2 and column 2, lines 57-59 that data from the workstations are transferred through the network to be printed. It would be obvious to send data to be printed from the file server 6 as well, since a file server is just a specialized computer. One can see in Fig. 3 that a transceiver is used for data reception.
- Indei discloses in Fig. 2 a printer (item 5b)
- Indei discloses a file holding section in Figs. 1, 6 and 8 for holding important information. This information may be billing data, user profile data, or confidential data (i.e. **second data**) (column 3, lines 27-30). The applicant's background also mentions that one could store printer setting and history data in flash EEPROMs, which are rewritable memories.
- Indei discloses in column 3, lines 55-61, a file renewing and forming section (Fig. 1, item 34). Lines 59-61, especially, disclose that the "...most recently updated important data is stored in the file holding section 34."
- Indei discloses in column 4, lines 1-15 the storing of important data from the print control to a file server. The file read and write section is the **event control unit**. Indei gives an example in column 3, lines 50-53 that the **backup event** would be

that data is periodically backed up, once a day. The condition for the backup event would be that time of the day has arrived.

- The data would be backed up to the file server that the data backup is being written to (column 4, lines 10-15). It would have been obvious that the file server stored this data in some form of memory, most likely a hard disk, as this is the conventional method of file storage in a server.
- Also, in the third embodiment of Indei's invention, one can see floppy disk drive can be disposed in the backup system as well, as mentioned in claim 1 above.
- Again, the motivation for the combination of these two references is mentioned in the rejection to claim 1.

31. Claim 31

- As mentioned above, the file read and write control section is the **event control unit.** Column 4, lines 32-46 describes how it handles getting a file from a file server. The restore event, although not explicitly stated, could be a user requesting the file to be restored. A **second condition** for this to happen is that important data is erased from the file holding section (column 4, lines 58-63).
- The file read and write control section would also read on the **data restore unit**, since it controls the reading and writing of data.

32. Claim 32

- The first memory unit would be the file holding section of various embodiments of Indei's invention. Column 3, lines 41-43 discloses that it could be a memory region in a magnetic disk – which is non-volatile. The second memory unit of the various embodiments of Indei would be file/web servers or a floppy disk. One of ordinary skill in the art knows that the data would likely be stored in a hard disk on the servers. Hard disks and floppy disks are non-volatile.

33. Claim 33

- Indei discloses in column 3, lines 55-61, a file renewing and forming section (Fig. 1, item 34). Lines 59-61, especially, disclose that the "...most recently updated important data is stored in the file holding section 34."

34. Claim 34

- Again, from the rejection to claim 6 above, the operator can specify any desired time in which to backup the data in the primary memory to the reserve memory (i.e. floppy disk).
- Also, the applicant discloses in the background on page 1, lines 16-18, that settings could be restored from flash EEPROMs when the power is turned on.

36. Claim 36

- Again, from the rejection to claim 6 above, the operator can specify any desired time in which to backup the data in the primary memory to the reserve memory (i.e. floppy disk).
- Also, the applicant discloses in the background on page 1, lines 16-18, that settings could be restored from flash EEPROMs when the power is turned on. In this case, Indei stores the data to a server or a floppy disk, which are other well-known types of data storage devices.

37. Claim 37

- The printer backup control of Indei's invention (Figs. 1, 6, and 8) reads on the **computer device** since a computer is known to be electronic machinery capable of processing information. The **host device** can be the file/web server that the backup control is connected to through a network.

39. Claim 39

- In Fig. 1 discloses a R/W control section for controlling reading and writing to and from the file holding section. This R/W control section effectively acts as the **relay receiver** and the **relay transmitter** as being claimed by the applicant since it communicates with the file/web server/ floppy disk and the file holding section of the print control.
- The backup unit would be the file server that the data backup is being written to (column 4, lines 10-15). It would be obvious that the file server stored this data in some form of memory, most likely a hard disk, which is non-volatile.
- In Fig. 1, the file server is connected to through a network.

40. Claim 40

- One would understand in looking at Fig. 1 that the network is for data transfer.

II. Claims 8, 25, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Indei (U.S. Patent No. 5,131,077), in view of the applicant's submitted prior art in the background of the specification, and further in view of Takaoka (U.S. Patent No. 5,103,318).

8. Claims 8 and 25

- Again, from the rejection to claim 6 above, the operator can specify any desired time in which to backup the data in the primary memory to the reserve memory (i.e. floppy disk).
- Although, neither Indei nor the applicant's background discloses the backing up of data when power is turned off, it is inherent for electronic machinery such as printers to have power. Conventional printers have a power button for turning the printer on and off. Again, the operator can decide to back up the data at any time (Indei, column 6, lines 48-49).
- The tertiary reference, Takaoka, discloses an apparatus with a backup memory capable of saving information when power is turned off and then back on (Takaoka – abstract)
- All three references are in the art of printing and making backups of important information. Therefore, it would be obvious to one of ordinary skill in the art to backup the data before the power is turned off since one would have understood that power loss is usually associated with data loss. The motivation would be to prevent loss of important data.

35. Claim 35

- Although, neither Indei nor the applicant's background discloses the backing up of data when power is turned off, it is inherent for electronic machinery such as printers to have power. Conventional printers have a power button for turning the printer on and off. Again, the operator can decide to back up the data at any time (Indei, column 6, lines 48-49).
- The tertiary reference, Takaoka, discloses an apparatus with a backup memory capable of saving information when power is turned off and then back on (Takaoka – abstract)
- Again, the motivation would be the same as the rejection to claim 8 above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yixing Qin whose telephone number is (571)272-7381. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on (571)272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YQ

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